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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,572	05/19/2005	Kinzo Kishida	P1128US	7517

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EXAMINER	
LIVEDALEN, BRIAN J	
ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/535,572	KISHIDA ET AL.	
	Examiner	Art Unit	
	Brian J. Livedalen	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4,6,9,17 and 18* is/are allowed.

6)☒ Claim(s) *1-3,5,7,8 and 10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to amendment filed 7/27/2006. Claims 1-18 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sahlin et al. (20030063888).

In regard to claim 1, Sahlin discloses (fig. 6) an optical fiber measuring module to be laid on a structure for measuring at least one physical quantity: an optical fiber cable (130); a base member (118) for holding the optical fiber cable, and an attachment member (112) for attaching the base member to the structure wherein the base member is configured for being attached to the attachment member while the base member is holding the optical fiber cable (page 2, paragraphs 0027, 0028).

In regard to claim 2, Sahlin discloses (fig. 6) an attaching device (page 3, paragraph 0031) provided between the attachment member and the structure for attaching the attachment member to the structure, and a locking device (104, 106) provided between the base member and the attachment member for locking the base member in the attachment member (page 2, paragraph 0028).

In regard to claim 3, Sahlin discloses (fig. 6) that the attachment device includes an adhering layer (page 3, paragraph 0031) provided on the attachment member and made of an adhesive or welding agent for adhering the attachment member to the structure.

In regard to claim 5, Sahlin discloses that the locking device locks the base member in the attachment member by the engagement of engaging portions (104, 106) provided at the base member with locking portions (128) provided at the attachment member (page 3, paragraph 0029).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Narendran et al. (5594819).

In regard to claim 1, Narendan discloses (fig. 2c) an optical fiber measuring module to be laid on a structure for measuring at least one physical quantity from the distortion and temperature of the structure having: an optical fiber cable (40); and an attachment member (48) for attaching the base member (44) to the structure wherein the base member is configured for being attached to the attachment member while the base member is holding the optical fiber cable (column 5, lines 18-26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narendran et al. (5594819) as applied to claim 1, and in view of Pope, Jr. et al. (6559437).

In regard to claims 7 and 10, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose using multiple fibers in the tubular base member. However, Pope, Jr. discloses (fig. 1) a tubular base member with three fibers (105) held along the longitudinal direction of the inner wall (column 4, lines 33-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have three fibers in order to detect a greater area and detect it more accurately.

In regard to claim 8, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose using multiple fibers in a strip-shaped base member. However, Pope, Jr. discloses (fig. 6) a strip-shaped base member (611) with two fibers along the longitudinal direction (column 6, lines 5-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use two fibers in a strip-shaped base member in order to more accurately detect distortion in a single plane of the structure.

In regard to claim 11, Narendran in view of Pope Jr. discloses a fiber-measuring module as set forth above with multiple fibers. Narendran fails to disclose using multiple fibers spirally placed in the tubular base member. However, Pope, Jr. discloses (fig. 3) a tubular base member with fibers spirally held on the inner wall (column 5, lines

4-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the fibers in a spiral pattern to more accurately detect distortion of such a cylindrical structure.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narendran et al. (5594819) as applied to claim 1, and in view of Tanabe (4795231).

In regard to claims 12 and 13, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose forming the base member with slits. However, Tanabe discloses (fig. 5) forming a base member (43) with slits (45) for enhancing the flexibility of the base member and to reduce distortion (column 3, lines 13-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make slits in the base member to provide greater flexibility.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narendran et al. (5594819) as applied to claim 1, and in view of Hazan et al. (4990769) and in further view of Pope, Jr. et al. (6559437).

In regard to claim 14, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose a base member with notches on opposite sides. However, Hazan discloses (fig. 4a) a base member (22) with notches taken out (23) (column 5, lines 1-12). It would have been obvious to one of ordinary skill in the art at the time of the invention to place notches in the base member in order to increase

flexibility. Narendan in view of Hazan fails to disclose placing the fiber in a wave pattern. However, Pope, Jr. discloses (fig. 6) placing a fiber in a wave pattern on a base member (column 6, lines 5-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to place the fiber in a wave pattern in order to detect a greater lateral area with only one fiber.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narendran et al. (5594819) as applied to claim 1, and in view of Sugai et al. (2001/0019103).

In regard to claim 15, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose multiple base members connected with couplers. However, Sugai discloses (fig. 7) a fiber sensor with multiple base members (10) that are coupled together (page 5, paragraph 76. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple base members in order to measure a greater area.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Narendran et al. (5594819) as applied to claim 1, and in view of Atoji et al. (2002/0051598).

In regard to claim 16, Narendran discloses a fiber-measuring module as set forth above. Narendran fails to disclose using a polarizing ring. However, Atoji discloses an optical fiber, which uses a polarizing ring formed by looping the optical fiber cable,

wherein a polarized state of a signal light propagating in the optical fiber cable is corrected (page 7, paragraph 0080). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a polarizing ring in order to reduce the plain of polarization allowing for a more precise measurement.

Allowable Subject Matter

Claims 4, 6, 9, 17, and 18 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 4, 6, 9, 17, and 18 are neither anticipated nor made obvious by the prior art of record.

Claims 4, 6, 9, and 17 are allowed for the reasons set forth in the previous office action dated 5/16/2006.

Response to Arguments

Applicant's arguments filed 7/27/2006 have been fully considered but they are not persuasive.

In response to applicant's arguments, the recitation "an optical fiber measuring module to be laid on a structure for measuring one physical quantity" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA

1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The limitations of claim 1 recite a structure that is complete and that is able to stand alone. The preamble only presents the intended use for the structure. Therefore, the preamble does not carry any patentable weight.

With respect to Applicant's argument that Sahlin does not disclose "an attachment member for attaching the base member to the structure wherein the base member is configured for being attached to the attachment member while the base member is holding the optical fiber cable," Examiner would like to draw Applicant's attention to paragraph 0028. Sahlin states therein, "Preferably, however, channel 100 is able to slide along mounting member 112 in a direction parallel to its length. **Channel 100 and mounting member 112 may be said to be slideably engagable with one another**." Accordingly, although this method might not be Sahlin's primary method of engagement, the base member is "configured for being attached to the attachment member while the base member is holding the optical fiber cable."

In response to Applicant's arguments regarding the Narendran et al. rejection, Examiner realizes that reference # 44 is a metal sheath. However, the limitation "for holding the optical fiber cable" functionally defines "a base member." Therefore, because the metal sheath is used "for holding the optical fiber cable" it would be considered "a base member". Alternatively, without prejudice to the above argument, the metal sheath still provides support to the optical fiber from below. Applying the broadest reasonable interpretation of the term "a base member for holding the optical fiber cable," Examiner believes that the metal sheath reads on this description. The fact

that the metal sheath surrounds the optical fiber does not preclude it from providing support similar to a base member.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Livedalen whose telephone number is (571) 272-2715. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bjl

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